

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	55	(562/824).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/06/06 07:23
L2	263	fluorine adj liquid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L3	5786	fluorine adj gas	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 07:23
L4	5999	(fluorine adj liquid) or (fluorine adj gas)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L5	1191	elemental near3 fluorine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L6	6896	((fluorine adj liquid) or (fluorine adj gas)) or (elemental near3 fluorine)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 06:32
L7	0	US-06586626-\$.DID.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L8	173	560/184	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L9	3	(fluorine adj liquid) and 560/184	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L10	1	US-0658662-\$.DID.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L11	1	"0056694".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41

## EAST Search History

L12	7	((562/825).CCLS.) and ((fluorine adj liquid) or (fluorine adj gas))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L13	5	((562/825).CCLS.) and (elemental near3 fluorine)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L14	17	((((fluorine adj liquid) or (fluorine adj gas)) or (elemental near3 fluorine) ) and (US-6586626-\$.DID. OR US-3900372-\$.DID. OR US-4524032-\$.DID. OR US-4868318-\$.DID. OR US-4996369-\$.DID. OR US-5093432-\$.DID. OR US-5322903-\$.DID. OR US-5466877-\$.DID. OR US-0488142-\$.DID. OR US-5571870-\$.DID. OR US-5578278-\$.DID. OR US-5674949-\$.DID. OR US-5753776-\$.DID. OR US-6093860-\$.DID. OR US-6255536-\$.DID.)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L15	29	US-6586626-\$.DID. OR US-3900372-\$.DID. OR US-4524032-\$.DID. OR US-4868318-\$.DID. OR US-4996369-\$.DID. OR US-5093432-\$.DID. OR US-5322903-\$.DID. OR US-5466877-\$.DID. OR US-5488142-\$.DID. OR US-5571870-\$.DID. OR US-5578278-\$.DID. OR US-5674949-\$.DID. OR US-5753776-\$.DID. OR US-6093860-\$.DID. OR US-6255536-\$.DID.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L16	2	"6586626".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L17	2	("3900372").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/06/06 05:41
L18	137	(562/825).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/06/06 05:41
L19	934	fluorosulfonyl	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41

## EAST Search History

L20	1041	fluorosulfonyl\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L21	1251	L19 or L20	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L22	4271	(sulfonylfluoride) or (sulfonyl adj fluoride)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L23	58	L21 same L22	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L24	4	L4 and L23	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L25	29	US-6586626-\$.DID. OR US-3900372-\$.DID. OR US-4524032-\$.DID. OR US-4868318-\$.DID. OR US-4996369-\$.DID. OR US-5093432-\$.DID. OR US-5322903-\$.DID. OR US-5466877-\$.DID. OR US-0488142-\$.DID. OR US-5571870-\$.DID. OR US-5578278-\$.DID. OR US-5674949-\$.DID. OR US-5753776-\$.DID. OR US-6093860-\$.DID. OR US-6255536-\$.DID.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L26	2	"6255536".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 05:41
L27	692	((((fluorine adj liquid) or (fluorine adj gas)) or (elemental near3 fluorine) and ((sulfonylfluoride) or (sulfonyl adj fluoride)))).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 06:34
L28	225	((((fluorine adj liquid) or (fluorine adj gas)) or (elemental near3 fluorine) and ((sulfonylfluoride) or (sulfonyl adj fluoride)))).clm.	US-PGPUB	OR	ON	2006/06/06 06:34
L29	225	((((fluorine adj liquid) or (fluorine adj gas)) or (elemental near3 fluorine) and ((sulfonylfluoride) or (sulfonyl adj fluoride)) and decompos\$)).clm.	US-PGPUB	OR	ON	2006/06/06 06:35
L30	4	(fluorine and ((sulfonylfluoride) or (sulfonyl adj fluoride)) and decompos\$).clm.	US-PGPUB	OR	ON	2006/06/06 06:35

## EAST Search History

L31	137	(562/825).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/06/06 07:23
L32	242677	fluorine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 07:23
L33	57	I31 and I32	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/06/06 07:24

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	JAN 17	Pre-1988 INPI data added to MARPAT
NEWS	4	FEB 21	STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results
NEWS	5	FEB 22	The IPC thesaurus added to additional patent databases on STN
NEWS	6	FEB 22	Updates in EPFULL; IPC 8 enhancements added
NEWS	7	FEB 27	New STN AnaVist pricing effective March 1, 2006
NEWS	8	MAR 03	Updates in PATDPA; addition of IPC 8 data without attributes
NEWS	9	MAR 22	EMBASE is now updated on a daily basis
NEWS	10	APR 03	New IPC 8 fields and IPC thesaurus added to PATDPAFULL
NEWS	11	APR 03	Bibliographic data updates resume; new IPC 8 fields and IPC thesaurus added in PCTFULL
NEWS	12	APR 04	STN AnaVist \$500 visualization usage credit offered
NEWS	13	APR 12	LINSPEC, learning database for INSPEC, reloaded and enhanced
NEWS	14	APR 12	Improved structure highlighting in FQHIT and QHIT display in MARPAT
NEWS	15	APR 12	Derwent World Patents Index to be reloaded and enhanced during second quarter; strategies may be affected
NEWS	16	MAY 10	CA/CAPLUS enhanced with 1900-1906 U.S. patent records
NEWS	17	MAY 11	KOREAPAT updates resume
NEWS	18	MAY 19	Derwent World Patents Index to be reloaded and enhanced
NEWS	19	MAY 30	IPC 8 Rolled-up Core codes added to CA/CAPLUS and USPATFULL/USPAT2
NEWS	20	MAY 30	The F-Term thesaurus is now available in CA/CAPLUS
NEWS	21	JUN 02	The first reclassification of IPC codes now complete in INPADOC
NEWS EXPRESS			FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005. V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT <a href="http://download.cas.org/express/v8.0-Discover/">http://download.cas.org/express/v8.0-Discover/</a>
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS LOGIN			Welcome Banner and News Items
NEWS IPC8			For general information regarding STN implementation of IPC 8
NEWS X25			X.25 communication option no longer available after June 2006

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 06:48:44 ON 06 JUN 2006

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.42

0.42

FILE 'CAPLUS' ENTERED AT 06:49:40 ON 06 JUN 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 Jun 2006 VOL 144 ISS 24

FILE LAST UPDATED: 5 Jun 2006 (20060605/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> sulfonylfluoride or (sulfonyl fluoride)

90 SULFONYLFLUORIDE

6 SULFONYLFLUORIDES

96 SULFONYLFLUORIDE

(SULFONYLFLUORIDE OR SULFONYLFLUORIDES)

29947 SULFONYL

18 SULFONYLS

29958 SULFONYL

(SULFONYL OR SULFONYLS)

249387 FLUORIDE

44668 FLUORIDES

265073 FLUORIDE

(FLUORIDE OR FLUORIDES)

981 SULFONYL FLUORIDE

(SULFONYL(W) FLUORIDE)

L1 1064 SULFONYLFLUORIDE OR (SULFONYL FLUORIDE)

=> fluorine

100846 FLUORINE

533 FLUORINES

L2 101142 FLUORINE

(FLUORINE OR FLUORINES)

=> l1 and l2

L3 83 L1 AND L2

=> 73-83 ti

158804 73

162706 83

344835 TI

1144 TIS

345678 TI

(TI OR TIS)

L4                    0 73-83 TI  
                      (73(W) 83(W) TI)

=> d 17 73-83 ti

L7 NOT FOUND

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> d 13 73-83 ti

L3    ANSWER 73 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Photochemical etching of silicon dioxide surface layer

L3    ANSWER 74 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI     $\beta$ -Sultones containing **fluorine**. XXXII.  
      Fluorosulfo-containing triazines

L3    ANSWER 75 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI     $\beta$ -Sultones containing **fluorine**. XXVII.  
       $\alpha$ -Hydrotetrafluoroethanesulfonic acid derivatives

L3    ANSWER 76 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Aromatic fluoro derivatives. XXIV. **Fluorine**-substituted  
      benzenesulfonyl fluorides

L3    ANSWER 77 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    **Fluorine**-containing carbon compounds

L3    ANSWER 78 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Structure and reactivity of **fluorine**-containing  $\beta$ -sultones

L3    ANSWER 79 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Reactive dyes containing fluorosulfonyl groups

L3    ANSWER 80 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    **Fluorine**-containing  $\beta$ -sultones. II. Hydrolysis of  
      tetrafluoroethane  $\beta$ -sultone

L3    ANSWER 81 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Toxic **fluorine** compounds. VIII.  $\omega$ -Fluoroalkanesulfonyl  
      chlorides and fluorides

L3    ANSWER 82 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Substituted pyridines

L3    ANSWER 83 OF 83    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    **Sulfonyl fluorides** of amino azo dyes

=> l1(l0l2

MISSING OPERATOR 'L1(L0L2'

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> l1(l)l2

L5                    25 L1(L)L2

=> d 15 10-25 ti

L5    ANSWER 10 OF 25    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Dissolution characteristics of acidic groups for 157-nm resist

L5    ANSWER 11 OF 25    CAPLUS    COPYRIGHT 2006 ACS on STN  
TI    Process for the preparation of fluorinated derivatives of nucleosides or

sugars

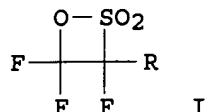
- L5 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Chemical modification of a Nafion sulfonyl fluoride precursor via in situ sol-gel reactions
- L5 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Chemical treatment of glass surface with fluorine-containing silanes
- L5 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Photopolymerized Epoxide Copolymer Thin Films with Surfaces Highly Enriched with Sulfonyl Fluoride Groups
- L5 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI New polyfluoroalkoxysulfonyl fluorides. Part VIII. Alcoholic and polymeric derivatives
- L5 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Separation of perfluoroalkyl sulfonyl fluoride
- L5 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI A useful synthesis of  $\omega$ -iodoperfluoroalkanesulfonyl fluorides and perfluoroalkane- $\alpha,\omega$ -bis-sulfonyl fluorides
- L5 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Improved acid electrolytes - the synthesis and structure of fluorine-containing sulfonic acids for fuel cells. Final report July 1987-August 1988
- L5 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Process for manufacture of hypofluorites and bishypofluorites
- L5 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI New sulfonyl fluoride esters
- L5 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Synthesis and evaluation of **fluorine**-19-labeled **sulfonyl fluorides** as probes of protease structure:  $\alpha$ -chymotrypsin
- L5 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Fluorine-containing  $\beta$ -sultones. 50. Geminal bis(fluorosulfonyl)-containing compounds
- L5 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Inorganic volatile fluorides obtained from electrical decomposition of sulfur hexafluoride in a quartz tube
- L5 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI **Fluorine**-containing  $\beta$ -sulfones. 46. 2-Hydrohexafluoropropane-2-**sulfonyl fluoride**
- L5 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Substituted pyridines

=> d 15 20 ti fbib abs

- L5 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI New sulfonyl fluoride esters  
AN 1987:477290 CAPLUS  
DN 107:77290  
TI New sulfonyl fluoride esters  
AU Khalilolah, Jilla; Mohtasham, Javid; Lerchen, Megan E.; Sheets, Roger M.; Gard, Gary L.  
CS Dep. Chem., Portland State Univ., Portland, OR, 97207, USA



SO Inorganic Chemistry (1987), 26(14), 2307-9  
 CODEN: INOCAJ; ISSN: 0020-1669  
 DT Journal  
 LA English  
 OS CASREACT 107:77290  
 GI



AB New **sulfonyl fluoride** esters  $\text{FSO}_2\text{CF}_2\text{C}(\text{O})\text{ORf}$  [ $\text{Rf} = \text{CF}_3\text{CH}_2$ ,  $(\text{CF}_3)_3\text{C}$ ,  $\text{C}_6\text{F}_5$ ],  $\text{FSO}_2\text{CF}(\text{CF}_3)\text{C}(\text{O})\text{ORf}$  [ $\text{Rf} = \text{CF}_3\text{CH}_2$ ,  $(\text{CF}_3)_2\text{CH}$ ,  $\text{C}_6\text{F}_5$ ], and  $\text{FSO}_2\text{CF}(\text{CF}_3)\text{C}(\text{O})\text{OR}$  ( $\text{R} = \text{Et}$ , allyl) were prepared by using the perfluoro sultones I ( $\text{R} = \text{F}$ ,  $\text{CF}_3$ ) with appropriate polyfluoro/perfluoro alcs. or hydrocarbon alcs. in the presence of NaF. In a like manner the diester  $[\text{FSO}_2\text{CF}(\text{CF}_3)\text{C}(\text{O})\text{OCH}_2]_2$  was prepared from ethylene glycol and I ( $\text{R} = \text{CF}_3$ ). Unlike the fluorinated esters with **fluorine** at the alkoxy  $\alpha$ -carbon atoms, these esters are stable in the presence of fluoride ion at  $25^\circ$  or higher temperature. Their IR, NMR, and mass spectra are reported.

=> d 15 1-9 ti

L5 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Simple transformation of thymine 1-[3-hydroxy-2-(phosphonomethoxy)propyl] derivatives to their 1-[3-fluoro-2-(phosphonomethoxy)propyl] counterparts

L5 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Pyrimidine 1-[2-(phosphonomethoxy)propyl] derivatives: their syntheses and utilization as potent inhibitors of thymidine phosphorylase (PD-ECGF) from Sd-lymphoma

L5 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Method for producing **fluorine**-containing unsaturated **sulfonyl fluoride**

L5 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Preparation of stabilized fluoropolymer

L5 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Process for production of fluorinated sulfonyl fluorides useful for ion exchange resins and chemical-resistant substances

L5 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Process for preparation of perfluorinated sulfonyl fluorides

L5 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Method for producing **fluorine**-containing **sulfonyl fluoride** compound

L5 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Process for preparing (per)fluorohalogen ethers by the reaction of acyl fluorides with halogenated 1,2-difluoroethylenes

L5 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Fluoro type surfactants

=> d 15 3,5-7 ti fbib abs

L5 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Method for producing **fluorine**-containing unsaturated  
**sulfonyl fluoride**  
 AN 2005:729629 CAPLUS  
 DN 143:193723  
 TI Method for producing **fluorine**-containing unsaturated  
**sulfonyl fluoride**  
 IN Sugiyama, Akinari; Ichihara, Kazuyoshi; Shinoki, Noriyuki; Mantani,  
 Toshiya; Kondou, Masahiro  
 PA Daikin Industries, Ltd., Japan  
 SO PCT Int. Appl., 20 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005073182	A1	20050811	WO 2005-JP1005	20050126
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				JP 2004-25768	A 20040202

OS CASREACT 143:193723; MARPAT 143:193723  
 AB A method for producing a **fluorine**-containing unsatd.  
**sulfonyl fluoride** represented by the chemical formula  
 $RfSO_2F$  (wherein Rf is a **fluorine**-containing hydrocarbon group having  
 at least one unsatd. bond and may contain at least one element selected  
 from oxygen, nitrogen and sulfur) is characterized in that a  
**fluorine**-containing unsatd. sulfonyl chloride represented by the chemical  
 formula  $RfSO_2Cl$  (wherein Rf is as defined above) is reacted with at least  
 one fluorinating agent selected from alkylamine hydrofluoride, pyridine  
 hydrofluoride, and polyvinylpyridine hydrofluoride. By this method, a  
**fluorine**-containing **sulfonyl fluoride** having an  
 unsatd. bond can be com. advantageously produced at low cost.  
 Furthermore, this method enables to produce the **fluorine**-containing  
 unsatd. **sulfonyl fluoride** in a simple procedure with  
 high selectivity and high yield. Thus, 20.0 g  $CF_2:CFOCF_2CF_2SO_2Cl$  was  
 added dropwise at 1.67 g/min to 33.5 g  $Et_3N.(HF)_3$  with stirring at  
 22° during which the liquid temperature rose from 22° to 33°.  
 After completion of the addition, the resulting mixture was stirred for  
 .apprx.1 h to give a reaction mixture with three phases  $Et_3N.(HF)_n$  (n = 4-6)  
 (liquid phase)/ $Et_3N.HCl$  (solid phase)/ $CF_2:CFOCF_2CF_2SO_2Cl$  (product liquid phase)  
 (bottom phase) which was distilled by a simple distillation to give 96.0%  
 $CF_2:CFOCF_2CF_2SO_2Cl$ .

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Process for production of fluorinated sulfonyl fluorides useful for ion  
 exchange resins and chemical-resistant substances  
 AN 2005:29302 CAPLUS  
 DN 142:114654  
 TI Process for production of fluorinated sulfonyl fluorides useful for ion  
 exchange resins and chemical-resistant substances  
 IN Murata, Koichi; Okazoe, Takashi; Murotani, Eisuke  
 PA Asahi Glass Company, Limited, Japan

SO PCT Int. Appl., 48 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005003082	A1	20050113	WO 2004-JP9769	20040702
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

				JP 2003-271071	A 20030704
EP 1642890	A1	20060405	EP 2004-747237		20040702
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				

				JP 2003-271071	A 20030704
				WO 2004-JP9769	W 20040702
US 2006111584	A1	20060525	US 2005-318978		20051228
				JP 2003-271071	A 20030704
				WO 2004-JP9769	A1 20040702

AB Title process comprises (i) oxidizing a compound YSRAERB with an oxidizing agent containing a halogen atom as the essential constituent into a compound XSO2RAERB, (ii) converting the obtained compound into FSO2RAFEFRBF by reacting with fluoride when X is a fluorine atom or after conversion of X into a fluorine atom when X is a halogen atom other than fluorine in a liquid phase, and (iii) decomposing this compound into a compound FSO2RAFCOF, wherein RA = a divalent organic group such as alkylene; RB, RBF = a monovalent organic group such as perfluoroalkyl; E = CH2OCO; Y = a monovalent organic group such as cyano; X = a halogen atom; RAF = a divalent organic group obtained by fluorinating RA; and EF = CF2OCO. Thus, 21.7 g 3-bromo-1-propanol and 64.1 g 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]-propanoyl fluoride reacted, the resulting compound was reacted with thiocyanic acid potassium salt, reacted with chlorine, substituted with fluoride, perfluorinated, and decomposed to give perfluoro(3-fluorosulfonyl)propionyl fluoride, which was reacted with hexafluoropropene oxide in the presence of cesium fluoride and diglyme, potassium hydrogen carbonate and glyme were added therein, and heated at 180-210° to give FSO2(CF2)3OCF:CF2.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Process for preparation of perfluorinated sulfonyl fluorides  
AN 2005:29287 CAPLUS  
DN 142:113432  
TI Process for preparation of perfluorinated sulfonyl fluorides  
IN Murata, Koichi; Okazoe, Takashi; Murotani, Eisuke  
PA Asahi Glass Company, Limited, Japan  
SO PCT Int. Appl., 52 pp.  
CODEN: PIXXD2

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005003062	A2	20050113	WO 2004-JP9779	20040702
	WO 2005003062	A3	20050324		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1640362 A2 20060329 JP 2003-270412 A 20030702  
 EP 2004-747247 20040702  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK  
 JP 2003-270412 A 20030702  
 WO 2004-JP9779 W 20040702  
 US 2006106252 A1 20060518 US 2006-322396 20060103  
 JP 2003-270412 A 20030702  
 WO 2004-JP9779 A1 20040702

OS MARPAT 142:113432

AB This invention pertains to a method for producing fluorinated sulfonyl fluorides with general formula of (FSO<sub>2</sub>)<sub>n</sub>RAF(EF<sub>1</sub>)<sub>m</sub> [wherein RAF = a (fluorinated) (n+m) valent organic group having two or more carbon atoms; EF<sub>1</sub> = one valent organic group; n ≥ 2; m ≥ 1] via fluorination and decomposition. For example, (FSO<sub>2</sub>CF<sub>2</sub>)<sub>2</sub>CF<sub>2</sub>COF was prepared in a multi-step synthesis starting from (BrCH<sub>2</sub>)<sub>2</sub>CHCO<sub>2</sub>H in good yield. This invention provides a convenient method to prepare perfluorinated sulfonyl fluorides at low cost with industrial advantages.

L5 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

TI Method for producing **fluorine**-containing **sulfonyl fluoride** compound

AN 2004:927161 CAPLUS

DN 141:395193

TI Method for producing **fluorine**-containing **sulfonyl fluoride** compound

IN Murata, Koichi; Okazoe, Takashi; Murotani, Eisuke

PA Asahi Glass Company, Limited, Japan

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

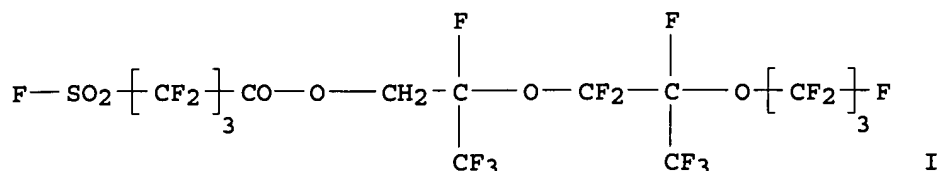
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004094365	A1	20041104	WO 2004-JP5874	20040423
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

JP 2003-119874 A 20030424

OS CASREACT 141:395193

GI



AB A method for producing a **fluorine-containing sulfonyl fluoride** compound which comprises oxidizing RB-E-RA-S-S-RA-E-RB to form XSO<sub>2</sub>-RA-E-RB, reacting the oxidation product with **fluorine** in a liquid phase to form FSO<sub>2</sub>-RAF-EF-RBF, and decomposing the fluorination product to prepare FSO<sub>2</sub>-RAF-COF [RA = divalent organic group; RAF = divalent organic group or the like; RB = monovalent organic group; RBF = monovalent organic group or the like; E = -COOCH<sub>2</sub>-; EF = -COOCF<sub>2</sub>-; X = halo] is disclosed. The method is almost free from major conventional difficulties associated with the production of the above **sulfonyl fluoride**, and also allows the production of **fluorine-containing sulfonyl fluoride** compds. having various mol. structures and being useful as a raw material for an ion exchange resin or the like with good efficiency at a low cost. For example, a mixture of compound I (4.2 g), e.g., prepared from (S(CH<sub>2</sub>)<sub>3</sub>COOH)<sub>2</sub> in 4 steps, and NaF (0.03 g) was stirred at 140 °C for 10 h and analyzed by GC-MS. The yield of FSO<sub>2</sub>(CF<sub>2</sub>)<sub>3</sub>COF was 73.7%. Of note, disclosed compds. are useful intermediates for ionic exchange resin.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> logoff hold\  
'HOLD\' IS NOT VALID HERE  
For an explanation, enter "HELP LOGOFF".

=> logoff hold		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	44.29	44.71
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-3.75	-3.75

SESSION WILL BE HELD FOR 60 MINUTES  
STN INTERNATIONAL SESSION SUSPENDED AT 06:56:23 ON 06 JUN 2006